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A method for providing an ad-hoc network provided, wherein at least one group of mobile devices operate as a device-to-device cluster having a currently elected cluster head device. The method comprises configuring, in a network apparatus for the device-to-device cluster, a cluster-specific cell-level radio network temporary identifier C-RNTI on the basis of a content-sharing service requested within the device-to-device cluster. C-RNTI is used to act as a cluster-specific virtual radio access user responsible for transmission between a serving base station and the currently elected cluster head device on behalf of the device-to-device cluster.

